

# CURRENT PROTOCOLS IN MOLECULAR BIOLOGY

VOLUME 1

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*SDS electrophoresis buffer, 5x*

15.1 g Tris base

72.0 g glycine

5.0 g SDS

H<sub>2</sub>O to 1000 ml

Dilute to 1x or 2x for working solution, as appropriate

*Do not adjust the pH of the stock solution, as the solution is pH 8.3 when diluted. Store at 0° to 4°C until use (up to 1 month).*

*SED (standard enzyme diluent)*

20 mM Tris·Cl, pH 7.5

500 µg/ml bovine serum albumin (Pentax Fraction V)

10 mM 2-mercaptoethanol

Store up to 1 month at 4°C

*Sodium acetate, 3 M*

Dissolve 408 g sodium acetate·3H<sub>2</sub>O in 800 ml H<sub>2</sub>O

Add H<sub>2</sub>O to 1 liter

Adjust pH to 4.8 or 5.2 (as desired) with 3 M acetic acid

*Sodium acetate buffer, 0.1 M*

*Solution A:* 11.55 ml glacial acetic acid/liter (0.2 M).

*Solution B:* 27.2 g sodium acetate (NaC<sub>2</sub>H<sub>3</sub>O<sub>2</sub>·3H<sub>2</sub>O)/liter (0.2 M).

Referring to Table A.2.2 for desired pH, mix the indicated volumes of solutions A and B, then dilute with H<sub>2</sub>O to 100 ml. (See Potassium acetate buffer recipe for further details.)

*Sodium phosphate buffer, 0.1 M*

*Solution A:* 27.6 g NaH<sub>2</sub>PO<sub>4</sub>·H<sub>2</sub>O per liter (0.2 M).

*Solution B:* 53.65 g Na<sub>2</sub>HPO<sub>4</sub>·7H<sub>2</sub>O per liter (0.2 M).

Referring to Table A.2.3 for desired pH, mix the indicated volumes of solutions A and B, then dilute with H<sub>2</sub>O to 200 ml. (See Potassium phosphate buffer recipe for further details.)

*SSC (sodium chloride/sodium citrate), 20x*

3 M NaCl (175 g/liter)

0.3 M Na<sub>2</sub>citrate·2H<sub>2</sub>O (88 g/liter)

Adjust pH to 7.0 with 1 M HCl

*STE buffer*

10 mM Tris·Cl, pH 7.5

10 mM NaCl

1 mM EDTA, pH 8.0

*TAE (Tris/acetate/EDTA) electrophoresis buffer*

*50x stock solution:*

*Working solution, pH ~8.5:*

242 g Tris base

40 mM Tris-acetate

57.1 ml glacial acetic acid

2 mM Na<sub>2</sub>EDTA·2H<sub>2</sub>O

37.2 g Na<sub>2</sub>EDTA·2H<sub>2</sub>O

H<sub>2</sub>O to 1 liter

*TBE (Tris/borate/EDTA) electrophoresis buffer*

*10x stock solution, 1 liter:*

108 g Tris base (890 mM)

55 g boric acid (890 mM)

40 ml 0.5 M EDTA, pH 8.0 (20 mM)